

What is claimed is:

1. A CDMA radio device for transmitting and receiving signals in a CDMA (Code Division Multiple Access) system, comprising:
 - reduction means for reducing sampling amount of input data;
 - 5 first path selection means for performing path selection for the data of which sampling amount is reduced in the reduction means;
 - means for supplementing data reduced in the reduction means to the data that is targeted for the path selection in the first
 - 10 path selection means; and
 - second path selection means for performing the path selection in accordance with the data supplemented with the reduced data and a result of the path selection in the first path selection means to thereby output a path estimation result.
- 15 2. The CDMA radio device according to claim 1, wherein said reduction means reduces the sampling amount of said input data by making a sampling frequency lower than that in analog/digital conversion for the input data.
3. The CDMA radio device according to claim 2, wherein said
- 20 reduction means reduces the sampling amount of said input data by thinning out digitized samples of a signal obtained after said analog/digital conversion.
4. The CDMA radio device according to claim 1, further comprising

means for creating a delay profile by correlation calculation of the data of which sampling amount is reduced using specific spread codes designated in cell information,

wherein said first path selection means selects a path from
5 said delay profile.

5. The CDMA radio device according to claim 4, wherein said means for supplementing data reduced in said reduction means supplements delay profile data at sampling time which is lost in said reduction means from several pieces of preceding and
10 following delay profile data necessary for a supplementing processing.

6. The CDMA radio device according to claim 4, wherein
said means for supplementing data reduced in the reduction means calculates magnitudes of samples preceding and following
15 a path location detected in said first path selection means in accordance with several pieces of preceding and following delay profile data necessary for the supplementing processing, and
said second path selection means compares the magnitudes between the preceding and following samples and the path location
20 selected in said first path selection means to determine a maximum point as a path location candidate, and ultimately determines the path by examining difference of respective paths from magnitude of an updated maximum path.

7. The CDMA radio device according to claim 4, further
25 comprising:

first cell selecting means for performing cell selection for the data of which sampling amount is reduced in said reduction means;

means for supplementing data reduced in said reduction means to the data targeted for said cell selection in said first cell selection means; and

second cell selecting means for performing said cell selection in accordance with the data supplemented with said reduced data and a result of said cell selection in said first cell selection means to thereby output cell information.

8. A simple path estimating method for a CDMA radio device for transmitting and receiving signals in a CDMA (Code Division Multiple Access) system, comprising:

a first step of reducing sampling amount of input data;
a second step of performing path selection for the data of which sampling amount is reduced in the first step;

a third step of supplementing data reduced in the first step to the data that is targeted for the path selection in the second step; and

a fourth step of performing the path selection in accordance with the data supplemented with the reduced data and a result of the path selection in the second step to thereby output a path estimation result.

9. The simple path estimating method according to claim 8, wherein said first step includes reducing the sampling amount

of said input data by making a sampling frequency lower than that in analog/digital conversion for the input data.

10. The simple path estimating method according to claim 9,
wherein said first step includes reducing the sampling amount
5 of said input data by thinning out digitized samples of a signal
obtained after said analog/digital conversion.

11. The simple path estimating method according to claim 8,
further comprising

a fifth step of creating a delay profile by correlation
10 calculation of the data of which sampling amount is reduced using
specific spread codes designated in cell information,

wherein said second step includes selecting a path from
said delay profile.

12. The simple path estimating method according to claim 11,
15 wherein said third step includes supplementing delay profile
data at sampling time which is lost in said first step from several
pieces of preceding and following delay profile data necessary
for a supplementing processing.

13. The simple path estimating method according to claim 11,
20 wherein

said third step includes calculating magnitudes of samples
preceding and following a path location detected in said second
step in accordance with some pieces of preceding and following

delay profile data necessary for the supplementing processing,
and

5 said fourth step includes comparing the magnitudes between
the preceding and following samples and the path location selected
in said second step to determine a maximum point as a path location
candidate, and ultimately determines the path by examining
difference of respective paths from magnitude of an updated
maximum path.

14. The simple path estimating method according to claim 11,
10 further comprising:

 a sixth step of performing cell selection for the data of
which sampling amount is reduced in said first step;

 a seventh step of supplementing data reduced in said first
step to the data targeted for said cell selection in said sixth
15 step; and

 an eighth step of performing said cell selection in
accordance with the data supplemented with said reduced data
and a result of said cell selection in said sixth step to thereby
output cell information.